

Application No.: 09/783,598
Amendment Under 37 C.F.R. §1.116 dated March 23, 2005
Reply to the Office Action dated December 23, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended): A front-and-back electrically conductive substrate comprising:

a plurality of posts extending through said substrate, said posts being ~~composed of a material that can be~~ anisotropically etched silicon, and each of the posts having an electrically conductive portion that has at least a first surface on one side of said substrate and a second surface on another side of said substrate that communicate with each other; and

an insulative substrate that supports the plurality of posts, said insulative substrate being disposed between said first surface and said second surface of said substrate.

Claim 2 (Previously Presented): The front-and-back electrically conductive substrate as claimed in claim 1, wherein the electrically conductive portion comprises an electrically conductive film covering a peripheral surface of the posts.

Claim 3 (Original): The front-and-back electrically conductive substrate as claimed in claim 1, wherein: the insulative substrate is composed of either ceramic, glass or an organic resin; and the electrically conductive portion is a metal having a melting temperature higher than either a baking temperature or a melting temperature of an insulation used in the insulative substrate

Application No.: 09/783,598
Amendment Under 37 C.F.R. §1.116 dated March 23, 2005
Reply to the Office Action dated December 23, 2004

Claim 4 (Previously Presented): The front-and-back electrically conductive substrate as claimed in claim 1, further comprising a pad for mounting a semiconductor component formed on at least the first surface of the front-and-back electrically conductive substrate.

Claim 5 (Previously Presented): The front-and-back electrically conductive substrate as claimed in claim 1, further comprising a thin film composed of a wiring pattern layer and an insulation layer formed on at least the first surface of the front-and-back electrically conductive substrate.

Claim 6 (Previously Presented): The front and back electrically conductive substrate as claimed in claim 1, wherein the insulation material of the insulative substrate includes a material that compensates a difference in a coefficient of thermal expansion between the insulation material and a mounted semiconductor component

Claim 7 (Withdrawn): A front-and-back electrically conductive substrate comprising:
a first post composed of a material that can be anisotropically etched and having an electrically conductive portion that has at least a first surface and a second surface that communicate with each other;
a second post disposed so as to surround the first post at a distance and having an electrically conductive portion coupled to a ground; and
an insulation material that supports the first post and the second post.

Application No.: 09/783,598
Amendment Under 37 C.F.R. §1.116 dated March 23, 2005
Reply to the Office Action dated December 23, 2004

Claim 8 (Withdrawn): The front-and-back electrically conductive substrate as claimed in claim 7, further comprising a thin film having a signal pattern layer and a ground layer, the electrically conductive portion of the first post being electrically connected to the signal pattern layer, the electrically conductive portion of the second post being electrically connected to the ground layer.

Claim 9 (Withdrawn): The front-and-back electrically conductive substrate as claimed in claim 8, wherein the second post is positioned outside a region defined by a predetermined distance from the first post.

Claim 10 (Withdrawn): A method for manufacturing a front-and-back electrically conductive substrate, the method comprising the steps of:

forming, by a process of anisotropic etching, a plurality of posts having an electrically conductive portion that has at least a first surface and a second surface that communicate with each other; and

filling space between the plurality of posts with an insulating material.

Claim 11 (Withdrawn): The method for manufacturing a front-and-back electrically conductive substrate as claimed in claim 10, the method further comprising a step of polishing the first and second surfaces after the step of filling space between the plurality of posts with an insulating material.

Application No.: 09/783,598
Amendment Under 37 C.F.R. §1.116 dated March 23, 2005
Reply to the Office Action dated December 23, 2004

Claim 12 (Withdrawn): The method for manufacturing the front-and-back electrically conductive substrate as claimed in claim 10, wherein the anisotropic etching process leaves a portion of the etching material disposed so as to couple the plurality of posts to each other.

Claim 13 (Withdrawn): A multilayer printed wiring board comprising a plurality of inner layer boards stacked atop each other, each of the inner layer boards comprising:

a plurality of posts composed of a material that can be anisotropically etched and having an electrically conductive portion that has at least a first surface and a second surface that communicate with each other; and

an insulative substrate that supports the plurality of posts.

Claim 14 (Withdrawn): A printed board unit comprising:

a front-and-back electrically conductive substrate; and

a semiconductor component mounted on the front-and-back electrically conductive substrate,

the front-and-back electrically conductive substrate comprising:

a plurality of posts composed of a material that can be anisotropically etched and having an electrically conductive portion that has at least a first surface and a second surface that communicate with each other; and

an insulative substrate that supports the plurality of posts.

Application No.: 09/783,598
Amendment Under 37 C.F.R. §1.116 dated March 23, 2005
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Claim 15 (Withdrawn): A front-and-back electrically conductive substrate comprising:
a plurality of posts composed of a material that can be anisotropically etched and having
an electrically conductive portion that has at least a first surface and a second surface that
communicate with each other;
an insulative substrate that supports the plurality of posts; and
an electrically conductive film that surrounds the posts.

Claim 16 (Withdrawn): The front-and-back electrically conductive substrate as claimed
in claim 15, wherein the electrically conductive film that surrounds the posts comprises an
electrically conductive metal having a baking temperature higher than that of the insulation
material.